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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/695,306	10/25/2000	Seiji Umemoto	Q61458	1186

7590 04/16/2004

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EXAMINER

CHOI, JACOB Y

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 04/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/695,306

Applicant(s)

UMEMOTO, SEIJI

Examiner

Jacob Y Choi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02/03/2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-4,6-8,11 and 12 is/are allowed.
- 6) ☐ Claim(s) 1,5,9 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,5,9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yang et al. (USPN 6,323,919) in view of Sonehara (USPN 4,870,484).

Regarding claim 1, Yang et al. discloses a light pipe (20) including an upper surface (upper surface of the light guide plate, 20), a lower surface (bottom surface of the light guide plate, 20), and an incidence side surface (side surface of the light guide plate where the linear light source is against), and including a light output means (12) formed in the upper surface so that light incident on the incidence side surface exits from the lower surface through the light output means while light incident on the lower surface is transmitted through the upper surface (figures 1B), and a linear light source (32) disposed on the incidence side surface of the light pipe, whereby information light (10) generated on the lower surface of the light pipe is transmitted and made visible through the upper surface of the light pipe. Yang et al. discloses the claimed invention, except the linear light source having an effective light emission region, which is longer than a longitudinal length of the incidence side surface. Sonehara teaches that it is

known to have the linear light source having an effective light emission region, which is longer than a longitudinal length of the incidence side surface (figure 9A). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use modification in Yang et al. as taught by Sonehara in order to utilize more stable and uniform effective light emission region of the linear light source, since it is known that near electrodes/ends of the linear light source delivers unstable and un-uniform effective light emission.

Regarding claim 5, Yang et al. in view of Sonehara discloses claimed invention, explained above. In addition, Yang et al. discloses a liquid-crystal cell disposed on a lower surface of the plane light unit, the liquid-crystal cell including a reflection layer (8).

Regarding claim 9, Yang et al. in view of Sonehara discloses claimed invention, explained above. In addition, Yang et al. discloses the information light on the lower surface of the light pipe is constituted by an image and the image is visibly transmitted and made visible through the upper surface of the light pipe.

Regarding claim 10, Yang et al. in view of Sonehara discloses claimed invention, explained above. In addition, Yang et al. discloses the image is provided by a liquid crystal cell, which is provided separately from the light pipe.

Allowable Subject Matter

3. The following is a statement of reasons for the indication of allowable subject matter: the claims recite a specific detail structure of a plane light source unit comprising the light output means of the light pipe has a repetitive structure of prism-like

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irregularities arranged at intervals of a pitch in a range of from 50 μ m to 1 mm, each of the prism-like irregularities being constituted by a combination of a short side surface and a long side surface, the short side surface is made of a slope inclined down from the incidence the surface toward an end side opposite to the incidence side surface at an inclination angle in a range of from 30 to 45 degrees with respect to a reference plane of the lower surface, and the long side surface is made of a slope having an inclination angle in a range of from 0-10 degrees with respect to the reference plane, so that a difference between the inclination angle is not larger than 5 degrees as a whole, the difference between the inclination angle of adjacent long side surfaces is not larger than 1 degree, and a projected area of the long side surface on the reference plane is not smaller than give times as large as that of the short side surface. Because none of the reference disclosed the combination of a linear light source having an effective light emission region, which is longer than a longitudinal length of the incidence side surface with a detailed structure of the light pipe where a repetitive structure (50 μ m to 1.0 μ m) of prism-like irregularities being constituted by a combination of a short side (30-45 degrees) surface and a long side (0-10 degrees) surface, nor is there any motivation to combine them, the claims deemed patentable over the prior art of record. Claims 2-4, 6-8, & 11-12 are allowed.

Response to Amendment

4. Examiner acknowledges that the applicant has amended claim 2 to be in independent form by incorporating all the features of claim 1. Also, applicant has newly added claims 11 –12.

Response to Arguments

5. Applicant's arguments filed 02/06/2004 have been fully considered but they are not persuasive.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, reference Sonehara clearly shows (drawing figures), claims its linear light source, & how they are put together as applicant claims *"a linear light source disposed on the incidence side surface of the light pipe, the linear light source having an effective light emission region which is longer than a longitudinal length of the incidence side surface"* The examiner has established a prima facie case of obviousness as explained in previous office action & above paragraphs; *"It would have been obvious to one having ordinary skill in the art at the time the invention was made to use modification in Yang et al. as taught by Sonehara in order to utilize more stable and uniform effective light emission region of*

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the linear light source, since it is known that near electrodes/ends of the linear light source delivers unstable and un-uniform effective light emission."

Drawings and pictures can anticipate claims if they clearly show the structure which is claimed. *In re Mraz*, 455 F.2d 1069, 173 USPQ 25 (CCPA 1972). However, the picture must show all the claimed structural features and how they are put together. *Jockmus v. Leviton*, 28 F.2d 812 (2d Cir. 1928). The origin of the drawing is immaterial. For instance, drawings in a design patent can anticipate or make obvious the claimed invention as can drawings in utility patents. When the reference is a utility patent, it does not matter that the feature shown is unintended or unexplained in the specification. The drawings must be evaluated for what they reasonably disclose and suggest to one of ordinary skill in the art. *In re Aslanian*, 590 F.2d 911, 200 USPQ 500 (CCPA 1979). See MPEP § 2121.04 for more information on prior art drawings as "enabled disclosures."

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Mentioned references are analogous art, which are in the field of applicant's endeavor. It is known problem that near electrodes/ends of the linear light source delivers un-uniform effective light emission & to utilize more uniform effective light emission region by having the linear light source longer than the incidence side surface of the light guide reasonably solves the problem without improper hindsight reasoning.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob Y Choi whose telephone number is (571) 272-2367. The examiner can normally be reached on Monday-Friday (10:00-7:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JC

A handwritten signature in black ink, appearing to read 'T. M. Sember', with a long horizontal flourish extending to the right.

**THOMAS M. SEMBER
PRIMARY EXAMINER**